

# Configuration Approach to Strategic & Entrepreneurial Orientation Construct & Small Firm Growth: Evidence from India

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## Abstract

Various researchers have articulated firm level entrepreneurship as a firm's strategic approach towards entrepreneurship comprising innovativeness, proactiveness and risk-taking and held that these three dimensions co-vary. Lumpkin and Dess [1] suggested addition of competitive aggressiveness and autonomy to the existing three dimensions and argued that these five dimensions vary independently. Prior research indicates that entrepreneurial orientation (EO) construct is a key ingredient in small firm's success but few studies have reported an insignificant or negative relationship. Researchers have highlighted the role of contextual variables both exogenous and endogenous in influencing EO-Firm Growth relationship. Building upon past studies, this paper examines EO construct comprising five independent dimensions with environmental uncertainty and resources as moderating variables. Results of the models estimated using contingency and configuration approach indicate that the five dimensions of EO vary independently and show significant interaction effects especially when both the moderating variables were configured simultaneously with individual dimensions of EO construct.

## Keywords

Strategic & Entrepreneurial Orientation, Environmental Uncertainty, Resources, Contingency & Configuration Approach

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## 1. Introduction

Entrepreneurship is considered as the key driver of economic growth, new business creation, rejuvenation and job creation. There is enough literature about individual entrepreneur, but relatively little is known about firm-level entrepreneurship [2]. Wiklund and Shepherd [3] mentioned that the emergence of new

economic activity lies at the heart of entrepreneurship. Anderson *et al.* [4] highlighted the importance of understanding what makes a firm entrepreneurial and how to distinguish entrepreneurial firms from conservative ones. While entrepreneurship means making “new entry” the processes or approaches that lead to a new entry is termed as firm’s Strategic & Entrepreneurial Orientation. This strategic behaviour of firm is termed as its entrepreneurial orientation (EO) construct. Owners/Managers of small businesses develop and communicate firm’s direction through the choices they make. The actions they pursue develop subconsciously their strategic direction [5]. Most studies have highlighted positive relationship between EO and firm growth (e.g. Miller [6]; Wiklund & Shepherd [7]; Zahra [8]; Zahra & Covin [9]) but there have been few studies that have reported inadequate or even negative relationship (Matsuno *et al.* [10]; Morgan & Strong [11]; Smart & Conant [12]). There can be several reasons behind these inconsistent and at times contradictory findings.

Researchers have highlighted the relevance of contextual variables and how they influence the relationship between EO and firm growth. Past literature suggests that this relationship is influenced by number of contextual variables both exogenous as well as endogenous. The external environment firms face today is very complex and uncertain [13] and this uncertain environment brings opportunities as well as threats for firms, and they have to carefully examine them while taking key strategic decisions. This means that a firm’s entrepreneurial approach, which suggests the level to which small firm owners/managers are ready to take business related risks, favour change and innovate to develop a competitive advantage for their firms by competing aggressively with other firms, is influenced by the prevailing uncertainty in external environment. Research in the past has focused on influence of resources on firm growth, firm’s entrepreneurial strategy (EO) also requires resources as this may facilitate firm growth. Many researchers in the past have highlighted the need to integrate EO and resource based view (RBV) as this may have a stronger influence on firm performance. This study believes resources moderate the EO-Firm growth relationship but this influence varies across individual EO dimensions. This study empirically examines the influence of individual dimensions of EO on small firm growth and how environmental uncertainty and resources moderate the relationship between individual dimensions of EO construct and growth of small firms in an Indian setting.

This study makes a departure from existing studies by examining the independent influence of individual EO dimensions on small firm growth and the moderating influence of environmental uncertainty and resources on this relationship both separately and simultaneously using contingency and configuration approach. Miller [14] highlighted the importance of entrepreneurship in emerging economies by stimulating economic growth and increasing employment generation. Emerging economy like India is an appropriate setting for this research as EO construct has been extensively examined in developed economies while limited research has happened in emerging economies in this field [15].

The organization of the paper is as follows: Section 2 presents literature review. Section 3 describes the configuration approach method and Section 4 hypotheses development, which are followed by research design in Section 5 and data analysis in Section 6. Section 7 provides a brief discussion of the main findings; Section 8 states the managerial and policy implications of our analysis and Section 9 the implications for future research.

## 2. Literature Review

A brief overview of the relevant literature pertaining to development of EO construct and its various dimensions are presented in this section.

### 2.1. Emergence of Strategic & Entrepreneurial Orientation (EO) Construct

Pioneering work on firm level entrepreneurial behaviour was done by D. Miller [6], who built on the work of past scholars ( Mintzberg [16]; Khandwalla [17]; Miller & Friesen [18], Miller [6]) described this behaviour as firm's display of innovative, risk-taking and proactive approach in their strategic decisions. Thus the foundation of firm level entrepreneurship construct was laid, with these three dimensions, which as per him co-vary. Firms were categorized as entrepreneurial or conservative depending on whether they have high or low levels of all three dimensions. Most researchers in the past have uniformly adopted this gestalt approach to firm level entrepreneurial orientation (EO) Construct. Lumpkin & Dess [1] advocated competitive aggressiveness and autonomy as two key dimensions of EO Construct in addition to existing the three dimensions and further argued that these dimensions act independently rather than co-varying and have a unique and distinct relationship with firm performance. They argued that the existing uni-dimensional approach to EO construct can be one of the possible reasons behind the inconsistent and at times contradictory findings of the EO-Firm Growth relationship. Competitive Aggressiveness, captures Miller's [6] approach of "beating competitors to the punch", suggesting how firm responds to threats. While autonomy characterizes firm's propensity to act independently through freedom to its workforce, as strong layers of bureaucracy and old established traditions in firms don't contribute to new-entry.

### 2.2. Independence of EO Dimensions

The debate about the dimensionality issue of EO Construct has caused research to examine the dimensions of this construct both independently and collectively. Theoretically it is possible that all five dimensions are valuable for a firm but it is also possible that only a few of them are valuable. Miller [6] held that only when a firm regularly undertakes innovative endeavours, at considerable risk, ahead of its competition, should it be considered entrepreneurial. Majority of the researchers have held that entrepreneurial orientation construct is better explained as a uni-dimensional construct where the dimensions co-vary (Covin & Slevin [19]; Miller [6]; Wiklund [5]). But firms may be entrepreneurial and engage in

the process of new venture creation even when they exhibit certain level of imitiveness than innovation [20]). They suggested that firms with entrepreneurial approach may gain more from imitation than from being innovative. Entrepreneurs tend to be moderate risk-takers [21] or have a desire to avoid risk [22] but may have high inclination towards innovation [23]. Based on these arguments Lumpkin & Dess [1] argued that an attempt to restrict firms' entrepreneurial behavior to situations displaying high level of all EO dimensions falls short of explaining various other forms of entrepreneurship. There is emerging literature advocating that each dimension of EO make a unique and differential contribution to firms' entrepreneurial behaviour. The empirical findings supporting the uniqueness of individual dimensions of EO have been growing [24] [25] [26]. There is a strong possibility that some dimensions might have carried the other dimensions along who may have limited or insignificant influence on firm growth or even a negative influence while viewing EO as a uni-dimensional construct. Miller [14] while reflecting about the emergence of firm level entrepreneurship (EO) in the last three decades stressed the need to reexamine the EO Construct, hinting the need to view multidimensional nature of EO Construct comprising five independent dimensions.

### **2.3. Contingency Approach: Environmental Uncertainty & Resources as Moderating Variable**

Researchers have suggested that introduction of third variable while analyzing a relationship between two variables provides a better picture of the actual relationship. EO is considered necessary but insufficient for small firms to grow as researchers have highlighted that a bi-variate examination may be insufficient to explain EO and firm growth relationship [27] [28]. Venkataraman & Grant [29] suggested that it is necessary in entrepreneurship research to identify critical contingency variables and establish their roles. The external environment firms' face today is very complex and uncertain and this brings to fore both opportunities and threats [13] and small firms have to evaluate these opportunities and threats while taking key strategic decisions. Small firms that are new and do not possess the managerial skills to respond to environmental trends by adopting entrepreneurial strategies, find it difficult to grow. Their success depends, in large part, on their entrepreneurial strategies indicating their responses to the opportunities and threats posed by external environment [30] [31].

Researchers in the past have focused on direct relationship between resources and firm growth while less attention has been paid to effective utilization of resources through firm's strategic & entrepreneurial orientation [32]. Covin and Slevin [33] affirmed that entrepreneurial orientation requires resources as it affects firms' entrepreneurial strategy, which in turn affects its growth. EO would be beneficial to firms in identifying opportunities before others and these firms can organize their resources to take advantage of these opportunities. Eisenhardt & Martin [34] mentioned that along with resources firms entrepreneurial and strategic posture is important as it facilitates the effective management of resources

into value creation. Resources provide small firms the much required cushion to design and experiment with innovative products/services or processes, which fosters a culture of experimentation leading to better performance [8]. Wiklund and Shepherd [7] noted that the availability of resources allows firms to experiment with new pro-active and risky strategies that may not have been suitable in a resource-constrained environment.

### 3. Configuration Approach

Whereas the contingency approach examines the influence of one moderating variable at a time in two-way interaction, in reality many moderating variables act simultaneously. So configuration Approach is better way to examine the effect of different moderating variables simultaneously in a three-way interaction. Further configuration approach suggests that firms when configured on many variables grow more than those aligned on two constructs. It stresses that achieving high growth depends upon firm's entrepreneurial strategy aligned with the uncertain environment and available resources. Keeping in mind these aspects, this study examines the simultaneous influence of two moderating variables by examining their interaction on the relationship between individual EO dimensions and small firm growth using configuration approach.

### 4. Hypotheses Development

This section presents the various hypotheses that are tested in the present study assuming EO dimensions as the independent variables and growth of small firms as the dependent variable.

#### 4.1. EO Dimensions and Growth of Small Firms

The first dimension examined in this study is innovativeness; a strong focus on innovativeness helps in entering new markets, strengthens hold in existing ones and creates new possibilities [35]. Kreiser *et al.* [25] studied more than 1,000 small firms from six countries and found that innovativeness, pro-activeness has positive influence on sales growth. Yang [36] studied 406 small firms in Taiwan and found significant positive relationship between innovativeness, risk-taking and their growth. Becherer and Maurer's [37] examined presidents of 215 small firms and found a strong relationship between pro-activeness and sales growth. Lumpkin and Dess [38] examined 124 executives from 94 firms and found that pro-activeness has positive relationship with all performance indicators. Organizations that do not take risks lose their competitive edge resulting in losing their market share and are not able to sustain their strong position [6] [33]. Khandwalla [17] noticed strong relationship between risk-taking and firm growth. Competitive aggressiveness is viewed as initiating actions and then forcing the competitors to respond to them. Morgan & Strong [11] found a negative relationship between competitive aggressiveness and small business growth. Burgelman [39] mentioned that the driver for firm level entrepreneurship lies in the independent and autonomous initiatives of enterprising individuals within an

organization.

**H1: There would be significant relationship between innovativeness and growth of small firms.**

**H2: There would be significant relationship between pro-activeness and growth of small firms.**

**H3: There would be significant relationship between risk-taking and growth of small firms.**

**H4: There would be significant relationship between competitive aggressiveness and growth of small firms.**

**H5: There would be significant relationship between firm autonomy and growth of small firms.**

#### **4.2. Dimensions of EO-Environmental Uncertainty & Growth of Small Firms**

External environment brings an element of uncertainty to organizations and this poses numerous challenges for organizations. McGrath & MacMillan [40] mentioned that environmental uncertainty can benefit firms if they have an entrepreneurial approach. So firms can mitigate the influence of uncertain environment or enhance its performance by adopting an entrepreneurial posture [41]. Firms that focus on entrepreneurial strategy can maintain or even improve their performance in uncertain environment by exploring and exploiting new opportunities [42]. Zahra [8] found a strong relationship between entrepreneurship and growth among firms in uncertain environment. Specific aspects of entrepreneurial behaviour have been linked to uncertain environment. Miller and Friesen [18] posited that firms can adjust to environmental pressures through innovations in products or markets, use of proactive approach, by taking risk and competing aggressively. Khandwalla [17] pointed out that organizations respond to challenging environmental conditions by taking risk, which improves small firm growth. Miller and Friesen [18] found that pro-activeness was strongly associated with environmental uncertainty.

**H6a: Environmental uncertainty would moderate the relationship between innovativeness and growth of small firms significantly.**

**H6b: Environmental uncertainty would moderate the relationship between pro-activeness and growth of small firms significantly.**

**H6c: Environmental uncertainty would moderate the relationship between risk taking and growth of small firms significantly.**

**H6d: Environmental uncertainty would moderate the relationship between competitive aggressiveness and growth of small firms significantly.**

**H6e: Environmental uncertainty would moderate the relationship between autonomy and growth of small firms significantly.**

#### **4.3. Dimensions of EO-Resources & Growth of Small Firms**

Lumpkin and Dess [1] argued that small firms endowed with rich resources would be in a better position to follow entrepreneurial strategies. There is an

increasing consensus that resources encourage experimentation such as introducing new products/services, entering new markets [43]. Resources facilitate the discovery of new entrepreneurial opportunities in a proactive manner by encouraging firm employees to envision how existing resources can be redeployed in new value creating activities by granting them the necessary autonomy. Resources shift the focus away from analyzing what is currently being done to what is possible to be done and subsequently “opens an opportunity for entrepreneurial discovery and exploitation” [44]. While resources create the base from which a firm competitive capacity departs, strategic and entrepreneurial orientation (EO) concerns the mean of reaching that goal. Thus, availability of resources would be advantageous as risk associated with entering new market would be substantially reduced or firms would be in a position to absorb the consequences of risky decisions or the other way round the firms are better prepared to fight competition fiercely with the availability of resources. Wiklund [5] found that knowledge resources moderate the relationship between EO and firm growth; similarly Wiklund & Shepherd [7] noticed that financial resources moderate the relationship between EO and small firm growth. Thus:

**H7a: Resources would moderate the relationship between innovativeness and growth of small firms significantly.**

**H7b: Resources would moderate the relationship between pro-activeness and growth of small firms significantly.**

**H7c: Resources would moderate the relationship between risk-taking and growth of small firms significantly.**

**H7d: Resources would moderate the relationship between competitive aggressiveness and growth of small firms significantly.**

**H7e: Resources would moderate the relationship between autonomy and growth of small firms significantly.**

#### **4.4. Configuration of EO Dimensions, Env. Uncertainty & Resources**

Configurational approach suggests that firms when configured on various constructs do better than firms that align on two constructs or study the main-effect model. Researchers have stressed that using configuration approach to study various multivariate combinations can explain the complex interrelations between various moderating variables with far better predictive power than bivariate contingencies. Wiklund & Shepherd [7] found that firms perform better by aligning EO with financial resources and environment. Miller [45] examined the interaction among multiple variables using configuration approach and found that firms perform better when they align their entrepreneurial strategy with external environment and organizational structure. The opportunities of firm growth vary in uncertain environment and firms may have to pick specific aspects of entrepreneurial strategy that may result in firm growth further most entrepreneurial strategies are resource intensive. Gupta & Pandit [46], examined the influence of innovation configured with environmental dynamism (exogen-

ous) and resources (endogenous) for small and medium enterprises (SMEs) in India.

**H8a: Small firm growth is better explained by configurations of innovativeness, access to resources in uncertain environment.**

**H8b: Small firm growth is better explained by configurations of pro-activeness, access to resources in uncertain environment.**

**H8c: Small firm growth is better explained by configurations of risk-taking, access to resources in uncertain environment.**

**H8d: Small firm growth is better explained by configurations of competitive aggressiveness, access to resources in uncertain environment.**

**H8e: Small firm growth is better explained by configurations of autonomy, access to resources in uncertain environment.**

## 5. Research Design

Research design, including sample selection, variables and their measurement are explained in this section.

### 5.1. Sample

This research was field study and used cross-sectional research design through survey approach. The sampling frame was the database published by Small Industries Research Institute (SIRI), Delhi. From the sampling frame, a random sample of 2200 small firms spread across Delhi-NCR was shortlisted for data collection purposes. Prior appointments were taken through phone/mail and out of a total of 2200 small firms approached for personal appointments in Delhi-NCR, a total of 270 firms responded with appointments. Data was collected from 242 respondents representing 242 firms as single respondent was selected from each firm. Out of 242 responses received, 19 questionnaires were rejected because of incomplete information, so a final data of 223 firms was considered for data analysis. Out of total 223 firms, 115 operated in manufacturing sector and 108 operated in services sector and 167 of these were small firms and 56 were medium sized firms. Regarding the age of firm, 128 firms were set up before year 2005 and 95 firms were set up after year 2005, whereas size of firm was measured by number of full-time employees, 137 firms had less than 50 employees and 86 had more than 50 employees.

### 5.2. Variables & Measures:

#### 5.2.1. Entrepreneurial Orientation (EO) Dimensions

EO dimensions (innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy) were measured by 20 items and tested for reliability [6] [17] [19] [38] [47]. Nine items were taken from the original nine item scale of EO used to capture the dimensions of innovativeness, pro-activeness and risk-taking developed by Covin & Slevin [19]. This nine item scale has been supplemented by items developed by Lumpkin & Dess [38], Lumpkin *et al.* [47], to capture the dimensions of competitive aggressiveness and autonomy and few

more items have been added to measure the initial three dimensions of innovativeness, pro-activeness and risk-taking. This research used twenty items to measure the five dimensions of EO within the small firms using semantic differential method on 7 point Likert type scale.

### 5.2.2. Environmental Uncertainty

Miller [45] developed an environmental uncertainty scale measuring environmental hostility and dynamism. The scale used in this research to measure environmental uncertainty was developed by Miller [45], Naman & Slevin [48] and modified by Kroeger [49]. Environmental uncertainty was operationalized by using an eight item, 7 point Likert type scale.

### 5.2.3. Resources

Wiklund [5] mentioned that financial, knowledge and human resources was associated with firm growth. To operationalize this construct, this research used nine items to measure these three types of resources containing three items for each type of resources. These items have been extensively used in literature for measuring resource availability, financial resources [7], knowledge resources and human resources [5]. The resources were examined through the nine items measured on a 7 point Likert scale.

### 5.2.4. Small Firm Growth

With regard to small firms, there is no clarity as how to measure their performance [50] In case of small firms the researcher has to use subjective measures since the objective measures on their financial performance are privy to small firm owners. Since most small firms in India are privately held, so choosing the right parameter to measure performance was of utmost importance. Most researchers suggest firm sales growth as the most suitable performance measure in small firms [43]. Employment growth is also a way to capture firm growth. So the respondents were asked whether they were satisfied with the growth of their firm in the last three years on these two parameters on a 7-point Likert scale. A three year time frame was chosen to have an overall measure of their growth and lessen the impact of variation due to short-term conditions.

## 6. Data Analysis

Results of the data analysis, viz. reliability and validity, factor and correlation analysis, Regression analysis for hypotheses testing etc. are presented in this section.

### 6.1. Scale Reliability

Reliability of measurement scales was tested using Cronbach alpha, which is useful in investigating reliability of multi-item interval level scales. Nunnally, [51]; Hair *et al.* [52], held that Cronbach alpha value of above 0.70 is considered reliable. **Table 1** shows the results of reliability analysis of the scales used and their means and standard deviation. While examining Cronbach Alphas, it was

**Table 1.** Reliability coefficient, mean & st. deviation of variables.

Variables	No. of Items	Cronbach Alpha	Mean	Std. Deviation
Innovativeness	5	0.901	4.54	0.90
Pro-activeness	3	0.879	4.55	0.91
Risk-Taking	5	0.819	3.42	0.68
Comp. Agg.	3	0.782	4.00	0.82
Autonomy	4	0.756	5.12	0.95
Env. Uncertainty	8	0.714	5.35	0.58
Resources	9	0.705	4.97	0.63

N = 223.

found that all the variables examined in this study have reliability value above 0.70, which is the threshold value [51].

## 6.2. Scale Validity-Factor Analysis

To examine whether the EO construct represent these five as independent dimensions an exploratory factor analysis using principal component method with varimax rotation was conducted on the 20 items used to measure the five dimensions of EO Construct. Before conducting factor analysis, Kaiser-Meyer-Olkin (KMO) was done to check factorability and sample adequacy and results found the value of KMO was .811, which is higher than 0.50, indicating that the data is very reliable and suitable. Further, Bartlett's test of Sphericity for testing the significance was found to be significant, as indicated by the *p*-value (observed level of significance) corresponding to the chi-square statistic. Tabachnick and Fidell [53] mentioned that the choice of cutoff value of loadings is the preference of the researcher. For this research, factor loading above 0.522 was considered significant. While examining the results of factor analysis, all the items were found to have values above 0.522, so all the twenty items to measure the five dimensions were retained.

**Table 2** shows the results of factor analysis. All five dimensions combined together explained 67.6% of variance. The data used in this research was collected through questionnaire and contain self-reported measures, this raises a concern about Common Method Bias, which can result in inflated or deflated observed relationships between the constructs. To overcome this problem, Harman One Factor Test was done as mentioned by Podsakoff & Organ [54] to avoid the potential threat to validity. The variables were factor analyzed and results of un-rotated factor analysis were examined, which yielded five factors with Eigen values higher than one with no particular variable explaining substantial variance suggesting that common method bias was not a problem.

## 6.3. Correlation Analysis

Results of correlation analysis *i.e.* Pearson Product Moment Correlation Coefficient, measures the magnitude and direction of linear relationships among the

**Table 2.** Results of factor analysis.

	Factors				
	1	2	3	4	5
Q1-Introduced new products and Services	0.868				
Q2-Made major changes in products and services	0.805				
Q3-Has strong emphasis on developing innovations	0.768				
Q4-Prefers to develop new processes	0.858				
Q5-Favors experimentation	0.803				
Q14-Fights competition intensely		0.766			
Q15-Establish competitive position and exploit opportunities		0.820			
Q16-Employ aggressive market strategies		0.528			
Q6-Typically initiates action			0.856		
Q7-First one to introduce new products and processes			0.734		
Q8-Quick to seize opportunities			0.905		
Q9-Takes bold and wide ranging actions				0.544	
Q10-Strong proclivity for high risk projects				0.764	
Q11-Quick to spend resources on potential solutions				0.721	
Q12-Encourages people to take calculated risks				0.537	
Q13-Typically takes bold risk to exploit opportunity				0.741	
Q17-Encourage individuals to pursue opportunities					0.540
Q18-Individuals decide goals in consultation					0.865
Q19-Individuals or teams to take decisions					0.822
Q20-Employees initiative play role					0.591
Eigen Value	3.8	2.6	2.5	2.4	2.1
Variance Explained (%)	19%	13%	12.7%	12.5%	10.7%
Cumulative Variance Explained (%)	19%	32%	44.7%	56.9%	67.6%
Extraction Method: Principal Component Analysis					
Rotation Method: Varimax with Kaiser Normalization					

variables. A careful examination of the correlation matrix indicated that though many variables were correlated but there was hardly any degree of overlap among the independent variables indicating no issue of multicollinearity, so all the independent variables examined were retained. While analyzing the correlation matrix, it was found that correlations among the variables were well below 0.70, and the highest degree of correlation between two independent variables was 0.541 between innovativeness and pro-activeness. Sales growth was significantly correlated with all five EO Dimensions except autonomy. Though most of the EO dimensions were positively related with sales growth but competitive aggressiveness was negatively related with sales growth. Similarly employment growth was significantly correlated with some EO Dimensions. Sales and employment

growth were significantly correlated with each other and the degree of correlation was 0.581. The results of Correlation matrix provides a strong indication that exists distinct relationship between individual dimensions of EO and firm growth emphasizing that dimensions of EO Construct don't co-vary. These findings signal that for small firm growth all the dimensions of EO are not equally important, similarly their degree of association varies as the growth parameter changes *i.e.* their degree of association with sales and employment growth is different (Table 3).

#### 6.4. Hypotheses Testing

Hierarchical linear regression analysis was used to test all the hypotheses as this is more appropriate. At each stage of the hierarchical regression, the next order of interaction is introduced (Universal Model, two-way and three-way interaction respectively) and incremental  $R^2$  and F Tests of statistical significance were examined. The results are shown in four models; first the five independent variables were entered along with the main effect of the moderating variables namely environmental uncertainty and resources in the universal Model 1. Then the interaction terms were entered and the results of two-way interaction involving environmental uncertainty are shown in Contingency Model 2 and resources are shown in Contingency Model 3, lastly the outcome of three-way interaction employing configuration approach are displayed in Model 4. Tests for multicollinearity were done by computing tolerance values and variance inflation factor (VIF). These values ranged between 0.63 and 0.87 and the VIF values were less than 1.47, suggesting that multicollinearity was not the issue. In addition mean centering was done to overcome multicollinearity while testing the moderating variable, as the interaction term normally has higher probability of multicollinearity. The results of are shown in Table 4 and Table 5 respectively.

In Table 4 where the dependent variable is sales growth the results of Model 1 indicate that out of the five independent variables three were significantly related

Table 3. Results of correlation analysis.

	Inn.	Pro-Active	Risk	Comp. Agg.	Autonomy	Sales Growth	E. Growth	Env. Uncertainty	Res.
<b>Innovativeness</b>	1								
<b>Pro-activeness</b>	0.541**	1							
<b>Risk</b>	-0.189**	-0.230**	1						
<b>Comp. Agg.</b>	-0.109	-0.108	0.269**	1					
<b>Autonomy</b>	-0.184**	-0.029	0.110	0.090	1				
<b>Sales Growth</b>	0.395**	0.451**	0.115*	-0.165*	-0.093	1			
<b>Emp. Growth</b>	0.259**	0.316**	0.015	-0.010	-0.065	0.581**	1		
<b>Env. Un.</b>	-0.233*	-0.412**	-0.105	-0.038	-0.180**	-0.048	-0.085	1	
<b>Resources</b>	0.185**	0.325**	0.129*	-0.042	-0.080	0.060	0.022	0.524**	1

\*\*Correlation is significant at the 0.01 level (2-tailed); \*Correlation is significant at the 0.05 level (2-tailed).

**Table 4.** Results of hierarchical regression (Sales growth).

Variable Model	Universal Model 1	Contingency Model 2	Contingency Model 3	Configuration Model 4
	$\beta$	$\beta$	$\beta$	$\beta$
Innovation	0.222**	0.317**	0.330**	0.248*
Pro-active	0.314**	0.265**	0.300**	0.397**
Risk	-0.147**	-0.037	-0.097	0.205*
Comp. Agg.	-0.087	-0.131*	-0.105	-0.162*
Autonomy	-0.015	-0.034	-0.022	-0.112
Env. Uncertainty	-0.018	0.058	-0.034	-0.072
Resources	0.245**	0.164**	0.203**	0.190*
Inn. * Env.		-0.164*		
Pro. * Env.		-0.117		
Risk * Env.		0.128*		
Comp. * Env.		-0.087		
Aut. * Env.		-0.046		
Inn. * Res.			0.195**	
Pro. * Res.			0.189**	
Risk * Res.			0.102	
Comp. * Res.			-0.103	
Aut. * Res.			-0.037	
Env. * Res.				-0.076
Inn. * Env * Res.				0.402*
Pro. * Env * Res.				0.289*
Risk * Env * Res.				0.317**
Comp. * Env * Res.				0.296*
Aut. * Env * Res.				0.123
<b>R<sup>2</sup></b>	<b>0.289</b>	<b>0.309</b>	<b>0.351</b>	<b>0.485</b>
<b>Adj. R<sup>2</sup></b>	<b>0.266</b>	<b>0.298</b>	<b>0.334</b>	<b>0.457</b>
<b><math>\Delta R^2</math></b>	<b>0.289</b>	<b>0.020</b>	<b>0.062</b>	<b>0.196</b>
<b>F-Value</b>	<b>12.435</b>	<b>10.171</b>	<b>14.215</b>	<b>17.128</b>

Standardized Regression Coefficients are displayed in the Table; \* $p < 0.05$ , \*\* $p < 0.01$ .

with sales growth except competitive aggressiveness and autonomy, the two variables of innovativeness and pro-activeness were significantly and positively related with sales growth whereas risk-taking was significantly but negatively related with sales growth as indicated by the beta values and p-values. The five independent variables and the main effect of environmental uncertainty and resources accounted for a variance of 28.9% in sales growth as indicated by  $\Delta R^2$ . So the results support the first three hypotheses but reject the fourth and fifth hypothesis.

**Table 5.** Results of hierarchical regression (Employment growth).

Variable Model	Universal Model 1	Contingency Model 2	Contingency Model 3	Configuration Model 4
	$\beta$	$\beta$	$\beta$	$\beta$
Innovation	0.154*	0.183*	0.197*	0.123*
Pro-active	0.170*	0.156*	0.123*	0.107*
Risk	-0.087	-0.098	-0.120	-0.185
Comp. Agg.	-0.062	0.037	0.049	0.092
Autonomy	-0.045	-0.058	0.017	0.056
Env. Uncertainty	0.066	0.074	0.088	0.102
Resources	0.102	0.096	0.198*	0.208*
Inn. * Env.		-0.124		
Pro. * Env.		-0.053		
Risk * Env.		0.050		
Comp. * Env.		0.156*		
Aut. * Env.		0.016		
Inn. * Res.			0.173*	
Pro. * Res.			0.109	
Risk * Res.			0.096	
Comp. * Res.			0.148	
Aut. * Res.			0.077	
Env. * Res.				-0.124
Inn. * Env * Res.				0.302**
Pro. * Env * Res.				0.263*
Risk. * Env * Res.				0.142
Comp. * Env * Res.				0.196*
Aut. * Env * Res.				0.102
<b>R<sup>2</sup></b>	<b>0.106</b>	<b>0.118</b>	<b>0.146</b>	<b>0.214</b>
<b>Adj. R<sup>2</sup></b>	<b>0.980</b>	<b>0.103</b>	<b>0.137</b>	<b>0.197</b>
<b><math>\Delta R^2</math></b>	<b>0.106</b>	<b>0.012</b>	<b>0.040</b>	<b>0.108</b>
<b>F-Value</b>	<b>4.080</b>	<b>3.891</b>	<b>4.221</b>	<b>7.034</b>

Standardized Regression Coefficients are displayed in the Table. \* $p < 0.05$ , \*\* $p < 0.01$ .

While examining the moderating influence of environmental uncertainty on the relationship between each of the five independent variables with sales growth, it was clear that the moderating influence varies with individual EO dimensions as indicated in Model 2. In case of sales growth, the moderating influence of environmental uncertainty was significant with innovativeness and risk-taking as indicated by the beta value and  $p$ -value while the moderating influence was positive with risk-taking it was negative with innovativeness whereas the

influence was insignificant with the other three variables namely with pro-activeness, competitive aggressiveness and autonomy. The moderating influence of environmental uncertainty explained an additional variance of 2.0% in sales growth as indicated by  $\Delta R^2$ . The findings support hypotheses 6a & 6c and reject hypotheses 6b, 6d & 6e.

While examining the moderating influence of resources on the relationship between each of the five independent variables with sales growth, it was clear that the moderating influence varies with individual EO dimensions as indicated in Model 3. In case of sales growth, the moderating influence of resources was significant with innovativeness and pro-activeness as indicated by the beta value and  $p$ -value whereas the influence was insignificant with the other three variables namely with risk-taking, competitive aggressiveness and autonomy. The moderating influence of resources explained an additional variance of 6.2% in sales growth as indicated by  $\Delta R^2$ . The findings support hypotheses 7a & 7b and reject hypotheses 7c, 7d & 7e.

To examine the moderating influence of environmental uncertainty and resources on the relationship between each of the five independent variables with sales growth simultaneously using configuration approach, a three-way interaction was studied in Model 4. The results of three-way interaction were significant with four of the independent variables namely innovativeness, pro-activeness, risk-taking and competitive aggressiveness as indicated by the beta value and  $p$ -value whereas the influence was insignificant with autonomy. This three-way interaction using configuration approach explained an additional variance of 19.6% in sales growth as indicated by  $\Delta R^2$ . The findings support hypotheses 8a, 8b, 8c & 8d and reject hypotheses 8e. The findings of Model 4 clearly illustrate that the influence of three-way interaction using configuration approach was much stronger.

In the next step, the same process was repeated with employment growth as dependent variable in place of sales growth and the results are presented in **Table 5**.

In **Table 5** where the dependent variable is employment growth the results of Model 1 indicate that out of the five independent variables two variables namely innovation and pro-activeness were significantly related with employment growth and the other three independent variables namely risk-taking, competitive aggressiveness and autonomy were not significantly related with employment growth as indicated by the beta values and  $p$ -values. The five independent variables and the main effect of environmental uncertainty and resources accounted for a variance of 10.6% in employment growth as indicated by  $\Delta R^2$ . So the results support the first two hypotheses and don't support the next three hypotheses.

Model 2 indicates that the moderating influence of environmental uncertainty on the relationship between each of the five dimensions of EO as independent variables and employment growth, was limited. The moderating influence was significant only with competitive aggressiveness while for the other four independent

variables it was insignificant, as indicated by the beta and  $p$ -values. The moderating influence of explained an additional variance of 1.2% in employment growth as indicated by  $\Delta R^2$ . Thus the findings support hypotheses 6d and reject hypotheses 6a, 6b, 6c & 6e.

The moderating influence of resources on the relationship between each of the five dimensions of EO and employment growth varied with individual dimensions as shown in the table. The moderating influence was significant with innovativeness and competitive aggressiveness whereas the influence was insignificant with the other three dimensions, as indicated by the beta and  $p$ -values. The moderating influence of resources explained an additional variance of 4.0% in employment growth as indicated by  $\Delta R^2$ . Thus the findings support hypotheses 7a & 7d and reject hypotheses 7b, 7c & 7e.

To examine the simultaneous influence of environmental uncertainty and resources on the relationship between each of the five independent variables and employment growth using configuration approach, a three-way interaction was done as shown in Model 4. The results of three-way interaction were significant with three of the independent variables namely innovativeness, pro-activeness and competitive aggressiveness as indicated by the beta and  $p$ -values, whereas the influence was insignificant with risk-taking and autonomy. The three-way interaction model using configuration approach explained an additional variance of 10.8% in employment growth as indicated by  $\Delta R^2$ . The findings support hypotheses 8a, 8b & 8d and reject hypotheses 8c & 8e. The results clearly illustrate that examining the EO dimensions and moderating variables using configuration approach show better results.

## 7. Discussion

The present research has empirically examined EO as a multidimensional construct comprising five independent dimensions. Further, it explored the influence of environmental uncertainty (exogenous) and resources (endogenous) as moderating variables. The findings provide strong support that the five dimensions of EO construct have unique, distinct and independent relationship with small firm growth. Some dimensions have a significant positive relationship of varying magnitude whereas some have significant but negative relationship. Further, some dimensions have insignificant relationship with small firm growth. This clearly establishes that for a firm to be entrepreneurial, it doesn't require that all EO dimensions should be present in equal measure. This means that the presence of few dimensions or their combinations can make a firm entrepreneurial resulting in small firm growth. The findings find limited evidence that EO is universally beneficial for small firm growth, so the uni-dimensional nature of EO Construct masks the fact that firm growth can be the result of few dimensions of EO Construct or their combination.

The results indicate that moderating influence of environmental uncertainty and resources on the relationship between individual dimensions of EO and small firm growth varies in strength, direction and significance. Environmental

uncertainty as moderating variable influences the relationship with some EO dimensions. In some cases it strengthens the relationship whereas in some cases it inhibits the relationship with small firm growth. This indicates that if the level of environmental uncertainty is high then the display of certain aspects of entrepreneurial strategy by small firms may harm their growth prospects rather than helping them to grow. The results of this study strengthen the notion that EO should be viewed as a multidimensional construct comprising five independent dimensions and further the role of contextual variables on individual dimensions. Though the contingency approach was useful and provide few pointers but the findings clearly highlight the use of configuration approach in EO research where the influence of many moderating variables is examined simultaneously provide far better insights. But factors configured here involve both internal and external variables and also examine their influence on individual EO dimensions reflecting certain aspect of firm's entrepreneurial strategy.

## 8. Managerial and Policy Implications

This research suggests that the current approach of viewing EO as a composite, uni-dimensional construct contributing to the growth of small firms should be reviewed. The findings provide finer grained analysis of EO construct, its multi-dimensional nature comprising five dimensions. The fact that EO dimensions act independently will encourage small firm owners/managers to reconsider their understanding of EO construct and examine whether the construct in the present uni-dimensional form is delivering adequate value. Small firms should concentrate only on those dimensions that add significant value as considering all EO dimensions simultaneously stretch their limited resources and can be counterproductive. Focusing their limited resources only on those aspects of EO, which contribute to their performance is a far better option. This provides small firms the freedom and flexibility to selectively use sub-set of EO dimensions based on their understanding about which dimensions to pursue at a particular stage of development.

Environment uncertainty creates enormous pressures for all firms and especially for smaller ones. In emerging economies the degree of uncertainty is very high as compared to developed economies and small firms with their inherent limitations may find the going very difficult. The findings indicate that for small firms increasing environmental uncertainty make their life more difficult and they struggle to achieve better growth in uncertain environment. The owner/managers of firms should be cautious about displaying an entrepreneurial behaviour focusing on innovative approach in an uncertain environment as this may not help in growing their business but may harm it. At the same time this environment is positively related to risk-taking as it has a positive relation with small firm growth *i.e.* uncertain environment encourages small firms to take risk and this brings rewards in terms of enhanced growth. So owners/managers while handling their business in highly uncertain environment should be cautious and highly selective about their entrepreneurial strategies as the results may not be

desirable in most cases. Similarly these firms should not spread their limited resources on all EO dimensions equally as the moderating influence of resources is neither uniform nor significant on all EO dimensions. Lastly firms should realize that the influence of contextual variable is simultaneous and the results clearly indicate that the configuration approach provide a much better insight, so these firms should focus their attention on the three-way interaction.

## 9. Implications for Future Research

Since the sample used in this study was drawn from Delhi and NCR, the study may be replicated in different geographic areas to assess similarities or differences in the outcome. A longitudinal study can provide deeper insights about how the firm's entrepreneurial orientation through its various dimensions may change over a period of time. This study highlights that focusing on selective dimensions of EO construct rather than the uni-dimensional construct is better approach to grow and in a particular environmental context. Future research can examine whether some EO dimensions are universal whereas some other dimensions vary depending upon the context of small firms. The most important issue to be examined in future research is that majority of new entrants fail and there can be various reasons behind their failure. But the important question from research perspective is whether they fail because they lack a strong entrepreneurial orientation or they place too much emphasis on their entrepreneurial behaviour or place their importance on wrong dimensions of EO like putting too much importance on the dimensions which may not be important at that stage or putting too less importance on those dimensions which are very important. The answer to this key question can throw deeper insights about the survival and growth of these small firms at their initial stages. Future research should take into account the influence of various other contextual variables that can influence this relationship and also examine many other configurations, which are possible.

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